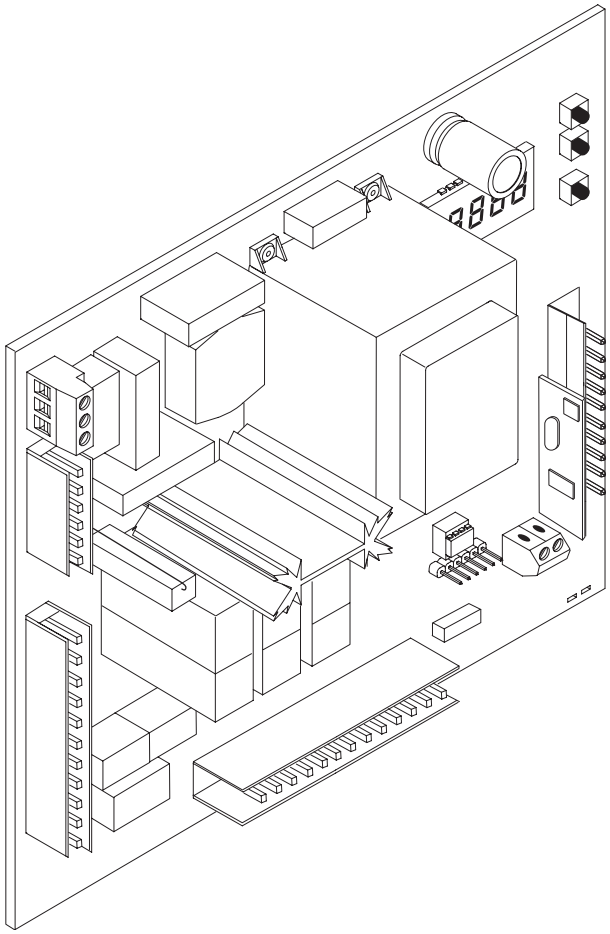
I QUADRO COMANDO
GB CONTROL PANEL
F CENTRALE DE COMMANDE
D STEUERUNG
E CUADRO DE MANDOS
P QUADRO DE COMANDO

LEO MV D



ISTRUZIONI D'USO E DI INSTALLAZIONE
INSTALLATION AND USER'S MANUAL
INSTRUCTIONS D'UTILISATION ET D'INSTALLATION
INSTALLATIONS-UND GEBRAUCHSANLEITUNG
INSTRUCCIONES DE USO Y DE INSTALACION
INSTRUÇÕES DE USO E DE INSTALAÇÃO

AZIENDA CON SISTEMA DI GESTIONE INTEGRATO CERTIFICATO DA DNV
= UNI EN ISO 9001:2000 =
UNI EN ISO 14001:2004

Via Lago di Vico, 44
36015 Schio (VI)
Tel.naz. 0445 696511
Tel.int. +39 0445 696533
Fax 0445 696522
Internet: www.bft.it
E-mail: sales@bft.it

DICHIARAZIONE DI CONFORMITÀ / DECLARATION OF CONFORMITY / DÉCLARATION DE CONFORMITÉ KONFORMITÄTSERKLÄRUNG / DECLARACION DE CONFORMIDAD / DECLARAÇÃO DE CONFORMIDADE

Fabbricante / Manufacturer / Fabricant / Hersteller / Fabricante / Fabricante: BFT S.p.a.

Indirizzo / Address / Adresse / Adresse / Dirección / Endereço: Via Lago di Vico 44
36015 - Schio
VICENZA - ITALY

- Dichiara sotto la propria responsabilità che il prodotto: / Declares under its own responsibility that the following product: /Déclare sous sa propre responsabilité que le produit: / Erklärt auf eigene Verantwortung, daß das Produkt: /Declara, bajo su propia responsabilidad, que el producto: / Declara, sob a sua responsabilidade, que o produto:

Centralina di comando mod./ Control unit mod./ Unité de commande mod./ Steuerzentrale mod./ Central de mando mod./ Central do mando mod./

LEO MV D

- È conforme ai requisiti essenziali di sicurezza delle Direttive: / It complies with the main safety requirements of the following Directives: / Est conforme aux exigences essentielles de sécurité des Directives: / Es entspricht den grundlegenden Sicherheitsbedingungen der Direktiven: / Es conforme a los requisitos esenciales de seguridad de las Directivas: / Está conforme aos requisitos essenciais de segurança das Directivas:

BASSA TENSIONE / LOW VOLTAGE / BASSE TENSION / NIEDERSPANNUNG / BAJA TENSION / BAIXA TENSÃO 73/23/CEE, 93/68/CEE (EN60335-1 ('03)) (e modifiche successive / and subsequent amendments / et modifications successives / und ihren nachfolgende Änderungen / e modificações sucessivas / y modificaciones sucesivas).
COMPATIBILITÀ ELETTROMAGNETICA / ELECROMAGNETIC COMPATIBILITY / COMPATIBILITÉ ÉLECTROMAGNÉTIQUE / ELEKTROMAGNETISCHE KOMPATIBILITÄT / COMPATIBILIDAD ELECTROMAGNETICA / COMPATIBILIDADE ELECTROMAGNÉTICA 89/336/CEE, 91/263/CEE, 92/31/CEE, 93/68/CEE (EN61000-6-2, EN61000-6-3) (e modifiche successive / and subsequent amendments / et modifications successives / und ihren nachfolgende Änderungen / e modificações sucessivas / y modificaciones sucesivas).
APPARECCHIATURE RADIO / RADIO SETS / INSTALLATIONS RADIO / RADIOAPPARATE / RADIOEQUIPOS / RADIOAPARELHOS 99/5/CEE (ETSI EN 301 489-3 (2000) +ETSI EN 301 489-1 (2000), ETSI EN 300 220-3 (2000)) (e modifiche successive / and subsequent amendments / et modifications successives / und ihren nachfolgende Änderungen / e modificações sucessivas / y modificaciones sucesivas).
DIRETTIVA MACCHINE / MACHINERY DIRECTIVE / DIRECTIVE MACHINES / MASCHINEN-DIREKTIV / DIRECTIVA MAQUINAS / DIRECTIVA MÁQUINAS 98/37/CEE (EN 12453('01), EN 12445 ('01), EN12978 ('03) (e modifiche successive / and subsequent amendments / et modifications successives / und ihren nachfolgende Änderungen / e modificações sucessivas / y modificaciones sucesivas).

SCHIO, 04/04/2006

Il Rappresentante Legale / The legal Representative
Le Représentant Légal / Der gesetzliche Vertreter
El Representante Legal / O Representante legal

(GIANCARLO BONOLLO)

MANUALE D'USO — ITALIANO

Nel ringraziarVi per la preferenza accordata a questo prodotto, la ditta è certa che da esso otterrete le prestazioni necessarie al Vostro uso.
Leggete attentamente l'opuscolo "Libretto istruzioni" che lo accompagna in quanto esso fornisce importanti indicazioni riguardanti la sicurezza, l'installazione, l'uso e la manutenzione. Questo prodotto risponde alle norme riconosciute della tecnica e delle disposizioni relative alla sicurezza. Confermiamo che esso è conforme alle seguenti direttive europee: 89/336/CEE, 73/23/CEE, 98/37/CEE e loro modifiche successive.

1) GENERALITÁ

Il quadro comandi **LEO MV D** viene fornito dal costruttore con settaggio standard. Qualsiasi variazione, deve essere impostata mediante il programmatore a display incorporato o mediante UNIPRO. La Centralina supporta completamente il protocollo EELINK compresa l'autoalimentazione del programmatore da centralina.
È disponibile in due versioni: per installazione esterna, all'interno della scatola SD, o montata e precablata all'interno dell'attuatore.
Le caratteristiche principali sono:

- Rallentamento della velocità all'accostamento.
- Regolazione elettronica della coppia.
- Frenatura elettrodinamica regolabile.
- Ingressi di fine-corsa chiusura / apertura
- Ingressi separati per le sicurezze.
- Ingresso orologio.
- Ingressso collegamento protocollo seriale (opzionale).
- Ricevitore radio incorporato

2) FUNZIONI

PER L'INSTALLATORE: compilare la tabella con in parametri impostati al fine di facilitare future modifiche e manutenzioni.
Tra parentesi quadre [ ] sono indicati i valori preimpostati.

MENU PARAMETRI

Tempo Chiusura Automatica	[10s]	⌊_____⌋	
Spazio rallentamento	[15]	⌊_____⌋	Impostabile solo con BARRIERA=1
Tempo allarme	[30s]	⌊_____⌋	
Zona	[0]	⌊_____⌋	
Coppia rallentamento	[99%]	⌊_____⌋	Impostabile solo con BARRIERA=1
Coppia apertura	[70%]	⌊_____⌋	Impostabile solo con BARRIERA=1
Coppia chiusura	[70%]	⌊_____⌋	Impostabile solo con BARRIERA=1
Freno	[52%]	⌊_____⌋	
Encoder	[1]	⌊_____⌋	Impostabile solo con BARRIERA=0,1
Tipo di barriera	[1]	⌊_____⌋	

MENU Logiche

TCA	[ON]	⌊_____⌋
3 Passi	[ON]	⌊_____⌋
Blocca Impulsi apertura	[ON]	⌊_____⌋
Blocca Impulsi TCA	[OFF]	⌊_____⌋
Pre allarme	[OFF]	⌊_____⌋
Fotocellule in apertura	[ON]	⌊_____⌋
Chiusura rapida	[OFF]	⌊_____⌋
Allarme SCA	[ON]	⌊_____⌋
Master/Slave	[OFF]	⌊_____⌋
Test fotocellule (PHOT)	[OFF]	⌊_____⌋
Test costa sensibile (BAR)	[OFF]	⌊_____⌋
Codice fisso	[OFF]	⌊_____⌋
Programmazione radiocomandi	[ON]	⌊_____⌋

3) DEMOLIZIONE

Attenzione: Avvalersi esclusivamente di personale qualificato.
L'eliminazione dei materiali va fatta rispettando le norme vigenti. Nel caso di demolizione, non esistono particolari pericoli o rischi derivanti dal prodotto stesso. È opportuno, in caso di recupero dei materiali, che vengano separati per tipologia (parti elettriche - rame - alluminio - plastica - ecc.).

4) SMANTELLAMENTO

Attenzione: Avvalersi esclusivamente di personale qualificato.
Nel caso la centralina venga smontata per essere poi rimontata in altro sito bisogna:

- Togliere l'alimentazione e scollegare tutto l'impianto elettrico.
- Nel caso alcuni componenti non possano essere rimossi o risultino danneggiati, provvedere alla loro sostituzione.

AVVERTENZE

Il buon funzionamento dell'operatore è garantito solo se vengono rispettati i dati riportati in questo manuale. La ditta non risponde dei danni causati dall'inosservanza delle norme di installazione e delle indicazioni riportate in questo manuale.

Le descrizioni e le illustrazioni del presente manuale non sono impegnative. Lasciando inalterate le caratteristiche essenziali del prodotto, la Ditta si riserva di apportare in qualunque momento le modifiche che essa ritiene convenienti per migliorare tecnicamente, costruttivamente e commercialmente il prodotto, senza impegnarsi ad aggiornare la presente pubblicazione.

USER'S MANUAL — ENGLISH

Thank you for buying this product, our company is sure that you will be more than satisfied with the product's performance. The product is supplied with a "**Warnings**" leaflet and an "**Instruction booklet**". These should both be read carefully as they provide important information about safety, installation, operation and maintenance. This product complies with the recognised technical standards and safety regulations. We declare that this product is in conformity with the following European Directives: 89/336/EEC and 73/23/EEC, 98/37/EEC (and subsequent amendments).

1) GENERAL OUTLINE

The **LEO MV D** control panel is supplied by the manufacturer with standard setting. Any alteration must be set by means of the incorporated display programmer or by means of UNIPRO. The Control unit completely supports the EELINK protocol, including the programmer self-supply from the control unit. It is available in two versions: one for external installation, inside the SD box, the other fitted and pre-wired inside the controller.
Its main characteristics are:

- Slow down of end-of-run speed.
- Electronic torque setting
- Adjustable electrodynamic braking
- Closing / opening limit-switch inputs
- Separate inputs for safety devices
- Clock input
- Serial protocol connection input (Option).
- Incorporated radio receiver

2) FUNCTIONS

FOR THE INSTALLER: Fill in the table with the parameters set, in order to facilitate future modifications and maintenance operations.
The preset values are indicated between square brackets [ ].

PARAMETER MENU

Automatic Closing Time (TCA)	[10s]	⌊_____⌋	
Slow-down Distance	[15]	⌊_____⌋	Can be set with "Barrier"=1 only.
Alarm time	[30s]	⌊_____⌋	
Zone	[0]	⌊_____⌋	
Slow-down torque	[99%]	⌊_____⌋	Can be set with "Barrier"=1 only.
Opening torque	[70%]	⌊_____⌋	Can be set with "Barrier"=1 only.
Closing torque	[70%]	⌊_____⌋	Can be set with "Barrier"=1 only.
Brake	[52%]	⌊_____⌋	
Encoder	[1]	⌊_____⌋	Can be set with "Barrier"=0,1 only.
Type of barrier	[1]	⌊_____⌋	

Logic MENU

TCA	[ON]	⌊_____⌋
3 Steps	[ON]	⌊_____⌋
Impulse locking	[ON]	⌊_____⌋
TCA impulse locking	[OFF]	⌊_____⌋
Pre-alarm	[OFF]	⌊_____⌋
Photocells on opening	[ON]	⌊_____⌋
Rapid closing	[OFF]	⌊_____⌋
SCA alarm	[ON]	⌊_____⌋
Master/slave	[OFF]	⌊_____⌋
Photocell test	[OFF]	⌊_____⌋
Electric edge test	[OFF]	⌊_____⌋
Fixed code	[OFF]	⌊_____⌋
Radio transmitter programming	[ON]	⌊_____⌋

3) SCRAPPING

Warning: This operation should only be carried out by qualified personnel. Materials must be disposed of in conformity with the current regulations. In case of scrapping, the automation devices do not entail any particular risks or danger. In case of materials to be recycled, these should be sorted out by type (electrical components, copper, aluminium, plastic etc.).

4) DISMANTLING

Warning: This operation should only be carried out by qualified personnel.
When the control unit is disassembled to be reassembled on another site, proceed as follows:

- Disconnect the power supply and the entire electrical installation.
- In the case where some of the components cannot be removed or are damaged, they must be replaced.

WARNINGS

Correct controller operation is only ensured when the data contained in the present manual are observed. The company is not to be held responsible for any damage resulting from failure to observe the installation standards and the instructions contained in the present manual.

The descriptions and illustrations contained in the present manual are not binding. The Company reserves the right to make any alterations deemed appropriate for the technical, manufacturing and commercial improvement of the product, while leaving the essential product features unchanged, at any time and without undertaking to update the present publication.

Thank you for buying this product, our company is sure that you will be more than satisfied with the product's performance. The product is supplied with a "**Warnings**" leaflet and an "**Instruction booklet**". These should both be read carefully as they provide important information about safety, installation, operation and maintenance. This product complies with the recognised technical standards and safety regulations. We declare that this product is in conformity with the following European Directives: 89/336/EEC and 73/23/EEC, 98/37/EEC (and subsequent amendments).

1) GENERAL SAFETY

WARNING! An incorrect installation or improper use of the product can cause damage to persons, animals or things.

- The "**Warnings**" leaflet and "**Instruction booklet**" supplied with this product should be read carefully as they provide important information about safety, installation, use and maintenance.
- Scrap packing materials (plastic, cardboard, polystyrene etc) according to the provisions set out by current standards. Keep nylon or polystyrene bags out of children's reach.
- Keep the instructions together with the technical brochure for future reference.
- This product was exclusively designed and manufactured for the use specified in the present documentation. Any other use not specified in this documentation could damage the product and be dangerous.
- The Company declines all responsibility for any consequences resulting from improper use of the product, or use which is different from that expected and specified in the present documentation.
- Do not install the product in explosive atmosphere.
- The construction components of this product must comply with the following European Directives: 89/336/CEE, 73/23/EEC, 98/37/EEC and subsequent amendments. As for all non-EEC countries, the above-mentioned standards as well as the current national standards should be respected in order to achieve a good safety level.
- The Company declines all responsibility for any consequences resulting from failure to observe Good Technical Practice when constructing closing structures (door, gates etc.), as well as from any deformation which might occur during use.
- The installation must comply with the provisions set out by the following European Directives: 89/336/CEE, 73/23/EEC, 98/37/EEC and subsequent amendments.
- Disconnect the electrical power supply before carrying out any work on the installation. Also disconnect any buffer batteries, if fitted.
- Fit an omnipolar or magnetothermal switch on the mains power supply, having a contact opening distance equal to or greater than 3,5 mm.
- Check that a differential switch with a 0.03A threshold is fitted just before the power supply mains.
- Check that earthing is carried out correctly: connect all metal parts for closure (doors, gates etc.) and all system components provided with an earth terminal.
- Fit all the safety devices (photocells, electric edges etc.) which are needed to protect the area from any danger caused by squashing, conveying and shearing.
- Position at least one luminous signal indication device (blinker) where it can be easily seen, and fix a Warning sign to the structure.
- The Company declines all responsibility with respect to the automation safety and correct operation when other manufacturers' components are used.
- Only use original parts for any maintenance or repair operation.
- Do not modify the automation components, unless explicitly authorised by the company.
- Instruct the product user about the control systems provided and the manual opening operation in case of emergency.
- Do not allow persons or children to remain in the automation operation area.
- Keep radio control or other control devices out of children's reach, in order to avoid unintentional automation activation.
- The user must avoid any attempt to carry out work or repair on the automation system, and always request the assistance of qualified personnel.
- Anything which is not expressly provided for in the present instructions, is not allowed.
- Installation must be carried out using the safety devices and controls prescribed by the EN 12978 Standard.

2) GENERAL OUTLINE

The **LEO MV D** control panel is supplied by the manufacturer with standard setting. Any alteration must be set by means of the incorporated display programmer or by means of UNIPRO. The Control unit completely supports the EELINK protocol.
It is available in two versions: one for external installation, inside the SD box, the other fitted and pre-wired inside the controller.
Its main characteristics are:

- Slow down of end-of-run speed.
- Electronic torque setting
- Adjustable electrodynamic braking
- Closing / opening limit-switch inputs
- Separate inputs for safety devices
- Clock input
- Serial protocol connection input (optional)
- Incorporated radio receiver

The board is provided with a terminal board which can be pulled out for easier maintenance or replacement. The board is supplied with a series of pre-wired jumpers to facilitate the installer's work.
The jumpers relate to the following terminals: 21-23, 21-24 and 21-30. If the above-mentioned terminals are in use, remove their respective jumpers.

3) TECHNICAL SPECIFICATIONS

Power supply: ..... 230V±10% 50Hz*
Mains/low voltage insulation: ..... > 2MOhm 500V⎓
Dielectric strength: ..... mains/low voltage 3750V~ for 1 minute
Motor output current: 1.5Amax
Maximum motor power: 750W
Supply to accessories: ..... 24V~ (1A max absorption)
Gate-open warning light: ..... 24V~ 3W max
Blinker: ..... 230V 40W max
Dimensions: ..... see figure 1
Fuses: ..... see figure 2
(* other voltages available on request)

4) TERMINAL BOARD CONNECTIONS (Fig.3)

WARNING – During the wiring and installation operations, refer to the current standards as well as principles of good technical practice.
The cables must be tied by additional fastening next to the terminals, by means of clips for example.
All the operator wiring operations must be carried out by qualified personnel.

JP1

1	⏚ GND terminal
2-3	Single-phase mains supply 230V±10% 50Hz (2=N) (3=L)

JP2

4-5	Blinker connection (mains voltage) 40W Max.
6-7-8-9	Motor connection: 6 operation 1 + capacitor 7 common (blue) 8 operation 2 9 capacitor

JP3

10-11	Output 24V~ 1A max – power supply for photocells or other devices.
12-13	Gate-open warning light output (24V 3W max)

JP4 **Barrier status output**

20-18	Closed Contact with barrier raised
20-19	Closed Contact with barrier lowered

Contact switching for barrier status control.
To be used in Parky systems (see paragraph 13)

JP5	Encoder connection **WARNING!** The maximum length of the connection cable of the encoder should not exceed 3.00 mt.

JP8

21-22	Open-Close button (N.O. Start), key selector.
21-23	Block button (N.C. Stop). If not used, leave jumped.
21-24	Photocell input (N.C.). If not used, leave jumped.
21-25	Opening limit switch connection (N.C. SWO). If not used, leave jumped.
21-26	Closing limit switch connection (N.C. SWC). If not used, leave jumped.
21-27	Not used
21-28	Open-Button connection (N.O. Open)
21-29	Close-Button connection (N.O. Close)
21-30	Rubber edge connection (N.C.). If not used, leave jumped.
21-31	Connection of clock input (N.O.). If the contact connected is open, the barrier closes and gets ready for normal operation. If the contact is closed (N.C.), the barrier opens and remains open until contact opening.

JP9

32	Photocell check input (PHOT FAULT) (see Fig. 3)
33	Electric edge check input (EDGE FAULT) (see Fig. 3)
38-39	Antenna input for radio-receiver (38 signal - 39 braid). Cable RG58.

5) PROGRAMMING

The control panel provided with a microprocessor is supplied with function parameters preset by the manufacturer, suitable for standard installations. The predefined parameters can be altered by means of either the incorporated display programmer or UNIPRO.

In the case where programming is carried out by means of UNIPRO, carefully read the instructions relating to UNIPRO, and proceed in the following way.

Connect the UNIPRO programmer to the control unit through the UNIFLAT accessory (See fig. 4). Enter the "CONTROL UNITS" menu, and the "PARAMETERS" submenu, then scroll the display screenfuls using the up/down arrows, and set the numerical values of the parameters listed below.

For the function logics, refer to the "LOGIC" submenu.

In the case where programming is carried out by means of the incorporated programmer, refer to Fig. A and B and to the "configuration" paragraph.

6) CONFIGURATION

The display programmer is used to set all the **LEO MV D** control panel functions.

The programmer is provided with three pushbuttons for menu scrolling and function parameter configurations:

\+ menu scrolling/value increment key

\- menu scrolling/value reduction key

OK Enter (confirm) key

The simultaneous pressure of the + and – keys is used to exit the active menu and move to the preceding menu.

If the + and – keys are pressed simultaneously at the main menu level (parameters, logics, radio, language, autosetting), programming is exited and the display is switched off (the OK message is displayed).

The modifications made are only set if the OK key is subsequently pressed.

When the OK key is pressed for the first time, the programming mode is entered.

The following pieces of information appear on the display at first:

- Control unit Software version
- Number of total manoeuvres carried out (the value is expressed in thousands, therefore the display constantly shows 0000 during the first thousand manoeuvres)
- Number of manoeuvres carried out since the latest maintenance operation (the value is expressed in thousands, therefore the display constantly shows 0000 during the first thousand manoeuvres)
- Number of memorised radio control devices.

When the OK key is pressed during the initial presentation phase, the first menu (parameters) can be accessed directly.

Here follows a list of the main menus and the respective submenus available.

The predefined parameter is shown between square brackets **[0]**.

The writing appearing on the display is indicated between round brackets.

Refer to Figures A and B for the control unit configuration procedure.

6.1) Parameter Menu (PArAM)

1 - Automatic Closing Time (tcA) [10s]

Set the numerical value of the automatic closing time from 1 to 180 seconds.

2 - Slow-down Distance (cn. rALL) [15]

Set the required slow-down distance for opening and closing between 0 and 100. The 000 value does not carry out any slow-down.

NOTE: If a slow-down distance value other than 000 is set, after the first manoeuvre, power failure, reset, or manual gate release, the control panel carries out a complete manoeuvre at reduced speed, in order to learn the length of stroke.

3- Alarm time (ALArn. t iME) [30s]

In the case of obstacle detection or photocell engagement, at the end of the time set (ranging from 10s to 240s) the SCA contact is closed. The contact is subsequently opened by the STOP command or by triggering of the closing limit switch. Only active when the SCA Alarm logic is set to OFF.

4- Zone (ZonE) [0]

Set the zone number between a minimum value of 0 and a maximum value of 127. See paragraph 7 on "Serial connection".

5- Slow-down torque (SLUd torQUE) [99%]

Set the motor torque value during the slow-down phase between 0% and 99%.

6- Opening torque (oPEn torQUE) [70%]

Set the motor opening torque value between 1% and 99%.

7- Closing torque (cLS. torQUE) [70%]

Set the motor closing torque value between 1% and 99%.

8 - Brake (brAKE) [52%]

Set the required brake value between 0 and 99%, compatibly with the weight of the rod and the existing stresses.

9 - Encoder (EncodEr) [1]

0: encoder disabled: timed slow-down, obstacle detection function not active. (The encoder can be disconnected).

1: encoder enabled: slow-down and obstacle detection by means of encoder **(default).**

⚠ WARNING: Check that the impact force value measured at the points established by the EN 12445 standard is lower than that specified in the EN 12453 standard.

⚠ Incorrect sensitivity setting can cause injuries to persons or animals, or damage to things.

10- Type of barrier (bArr tEr) [1]

0: **MOOVI 30RMM/50RMM** mod. barrier

1: **MOOVI 30S** mod. barrier

2: **BGV** mod. barrier

Factory-preset value, in case of maintenance or malfunctions, check the correspondence between the setting and the barrier model.

With the MOOVI 30RMM/50RMM barrier (0) , the following functions are not active:

- slow down

- torque setting (the barrier always works at maximum torque).

With the BGV barrier (2) , the following functions are not active:

- slow down

- torque setting (the barrier always works at maximum torque). obstacle detection.

6.2) Logic Menu (LoGI Ic.)

- TCA (tcA) [ON]

ON Activates automatic closing

OFF Excludes automatic closing

- 3 Steps (3 StEP) [ON]

ON Enables 3-step logic. A start impulse has the following effects:
barrier closed:.....opens
on opening: .....stops and enters TCA (if configured)
barrier open:..... closes
on closing: ..... stops and reverses movement
after stopping:.....opens

OFF Disables 3-step logic

- Opening Impulse lock (ibL oPEn) [ON]

ON The Start impulse has no effect during the opening phase.

OFF The Start impulse becomes effective during the opening phase.

- Impulse lock TCA (ibL tcA) [OFF]

ON The Start impulse has no effect during the TCA dwell period.

OFF The Start impulse becomes effective during the TCA dwell period.

- Pre alarm (PrE-ALArn) [OFF]

ON The blinker comes on about 3 seconds before the motor starts.

OFF The blinker comes on at the same time as the motor starts.

- Photocells on opening (Photc. oPEn) [ON]

ON: In case of obscuring, this excludes photocell operation on opening. During the closing phase, it immediately reverses the motion.

OFF: In case of obscuring, the photocells are active both on opening and on closing. When a photocell is obscured on closing, it reverses the motion only after the photocell is disengaged.

- Rapid closing (FASt cLS) [OFF]

ON: Closes barrier after photocell disengagement, before waiting for the end of the TCA (automatic closing time) set.

OFF: Command not entered.

- SCA Alarm (ScA ALArn) [ON]

ON: The SCA contact (terminals 12-13) behaves as follows:
with barrier open and on opening:..contact closed (warning light on)
with barrier closed:contact open.....(warning light off)
on closing: ..... intermittent contact (blinking)

OFF: The SCA contact closes according to the modes set by the Alarm Time parameter.

- Master/Slave (MASter) [OFF]

ON: The control panel is set as Master in a centralised connection (see Paragraph 7).

OFF: The control panel is set as Slave in a centralised connection (see Paragraph 7).

- Photocell test (tESt Phot) [OFF]

ON: Activates photocell check (see Fig. 3)

OFF: Deactivates photocell check

- Electric edge test (tESt bAr) [OFF]

ON: Activates electric edge check (see Fig. 3)

OFF: Deactivates electric edge check

- Fixed code (F IXEd codE) [OFF]

ON: The receiver is configured for operation in fixed-code mode, see paragraph on "Radio Transmitter Cloning".

OFF: The receiver is configured for operation in rolling-code mode, see paragraph on "Radio Transmitter Cloning".

- **Radio transmitter programming (rAd Io ProG) [ON]**

ON: This enables transmitter storage via radio:
1 – First press the hidden key (P1) and then the normal key (T1, T2, T3 or T4) of a transmitter already memorised in standard mode by means of the radio menu.
2 – Within 10s press the hidden key (P1) and the normal key (T1, T2, T3 or T4) of a transmitter to be memorised.
The receiver exits the programming mode after 10s, other new transmitters can be entered before the end of this time.
This mode does not require access to the control panel.

OFF: This disables transmitter storage via radio.
The transmitters can only be memorised using the appropriate Radio menu.

6.3) Radio Menu (rAd Io)

- **Add start (Add StArt)**
  Associates the required key to Start command
- **Read (rEAd)**
  Checks one key of a receiver; if stored it displays a message showing the receiver number in the memory location (from 01 to 64), and the key number (T1, T2, T3 or T4).
- **Eliminate list (ErASE 64)**
  WARNING! Completely removes all memorised radio control devices from the receiver memory.
- **Receiver code reading** (rX codE)
  This displays the code entered in the receiver.

6.4) Language Menu (LAnGUAGE)

Allows you to set the language on the display programmer.
5 languages are available:

- **ITALIAN (It)**
- **FRENCH (Fr)**
- **GERMAN (dEU)**
- **ENGLISH (EnG)**
- **SPANISH (ESP)**

6.5) MENU DEFAULT (dEFAULt)

Restores the preset default values on the control unit. After restoring, a new autoset operation must be carried out.

6.6) DIAGNOSTICS AND MONITORING

The display on the **LEO MV D** panel shows some useful information, both during normal operation and in the case of malfunctions.

Diagnostics:

In the case of malfunctions, the display shows a message indicating which device needs to be checked:

STRT = START input activation
STOP = STOP input activation
PHOT = PHOT input activation
FLT = FAULT input activation for checked photocells
SWO = input activation OPENING LIMIT SWITCH
SWC = input activation CLOSING LIMIT SWITCH
OPEN = OPEN input activation
CLS = CLOSE input activation
BAR = input activation SAFETY EDGE
TIME = TIMER input activation

In the case where an obstacle is found, the **LEO MV D** panel stops the door and activates a reverse manoeuvre; at the same time the display shows the "BAR" message.

6.7) Statistics

Having connected the UNIPRO programmer to the control unit, enter the CONTROL UNIT / STATISTICS menu and scroll the screenful showing the statistical parameters:

- Board microprocessor software version.
- Number of cycles carried out. If motors are replaced, count the number of manoeuvres carried out up to that time.
- Number of cycles carried out from the latest maintenance operation. It is automatically set to zero after each self-diagnosis or parameter writing.
- Date of latest maintenance operation. To be updated manually from the appropriate menu "Update maintenance date".
- Installation description. 16 characters can be entered for installation identification.

7) CONNECTION TO PARKY CAR-PARK MANAGEMENT SYSTEM

The board is provided with an output (terminal JP4) for controlling the barrier status, configured as follows (Fig.7):
contact **closed** between terminals **19 and 20** with barrier **lowered**
contact **closed** between terminals **18 and 20** with barrier **raised**.

8) SERIAL CONNECTION USING SCS1 BOARD (Fig.5)

The **LEO-MV-D** control panel allows several automation units (SCS1) to be connected in a centralised way by means of appropriate serial inputs and outputs. This makes it possible to use one single command to open and close all the automation units connected.
Following the diagram in Fig.5, proceed to connecting all the **LEO-MV-D** control panels, exclusively using a telephone-type line.
Should a telephone cable with more than one pair be needed, it is indispensable to use wires from the same pair.
The length of the telephone cable between one appliance and the next must not exceed 250 m.
At this point, each of the **LEO-MV-D** control panels must be appropriately configured, by setting a MASTER unit first of all, which will have control over all the others, to be necessarily set as SLAVE (see logic menu).
Also set the Zone number (see parameter menu) between 0 and 127.
The zone number allows you to create groups of automation units, each one answering to the Zone Master unit. **Each zone can only be assigned one Master unit, the Master unit in zone 0 also controls the Slave units in the other zones.**

8.1) Opposite barriers/gates (Fig.6)
Only with 3.7 or later microprocessor version.

By means of a serial connection, it is also possible to obtain centralised control of two opposite barriers/gates.
In this case, the Master M1 control panel will simultaneously manage closing and opening for the Slave M2 control panel.
SETTING REQUIRED FOR OPERATION:
- MASTER board: Zone=128, MASter=ON
- SLAVE board: Zone=128, MASter=OFF

WIRING REQUIRED FOR OPERATION:
- The MASTER and SLAVE control units are interconnected through the 4 wires (RX/TX) for the SCS1 interface boards;
- All the activation controls, as well as the remote controls must refer to the MASTER board;
- All the photocells (checked or unchecked) must be connected to the MASTER control panel;
- The safety edges (checked or unchecked) of the MASTER leaf must be connected to the MASTER control unit;
- The safety edges (checked or unchecked) of the SLAVE leaf must be connected to the SLAVE control unit.

9) SCRAPPING

Materials must be disposed of in conformity with the current regulations.
In case of scrapping, the automation devices do not entail any particular risks or danger. In case of recovered materials, these should be sorted out by type (electrical components, copper, aluminium, plastic etc.).

10) DISMANTLING

WARNING: before opening the door, make sure that the spring has been unloaded (rod at 43°). When the automation system is disassembled to be reassembled on another site, proceed as follows:

- Disconnect the power supply and the entire electrical installation.
- Remove the actuator from its fixing base.
- Disassemble all the installation components.
- In the case where some of the components cannot be removed or are damaged, they must be replaced.

WARNINGS

Correct controller operation is only ensured when the data contained in the present manual are observed. The company is not to be held responsible for any damage resulting from failure to observe the installation standards and the instructions contained in the present manual.

The descriptions and illustrations contained in the present manual are not binding. The Company reserves the right to make any alterations deemed appropriate for the technical, manufacturing and commercial improvement of the product, while leaving the essential product features unchanged, at any time and without undertaking to update the present publication.

Fig. A

D811512_02

ACCESS TO MENUS

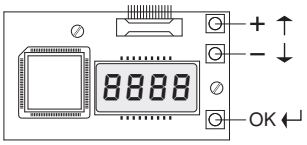
Press the OK key

OK

bFt
LEo Mu dIO
0000
0000
00

- Control unit software version
- No. total manoeuvres (in hundreds)
- No. manoeuvres since latest maintenance(in hundreds)
- No. radio control devices memorised

LEGENDA



- [00] Preset value
- ↑ +/ON ↓ –/OFF — Parameter increment/reduction or ON/OFF commutation
- OK — Press OK key (Enter/confirm)
- -↓ +↑ — Menu scrolling (+ = preceding - = following)
- +/- — Simultaneously press the + and - keys. Simultaneous pressure of the + and – keys allows you to exit the active menu and return to the preceding menu; if this takes place at the main menu level, programming is exited and the display switched off. The modifications made are only confirmed if the OK key is subsequently pressed.
- PrG oK — OK! message (confirms modification made)
- PrG Ko — KO! message (value or function error)
- -r- — "Wait" message (enter value or function)

+/- → PArAM. → OK → tcA → OK → [0 10] → P1 ↑+ P2 ↓- → OK → PrG oK

-↓ +↑ → dISt. SLoUd → OK → [0 15] → P1 ↑+ P2 ↓- → OK → PrG oK — Can be set with "Barrier"=1 only.

-↓ +↑ → ALArM t IME → OK → [030] → P1 ↑+ P2 ↓- → OK → PrG oK

-↓ +↑ → ZonE → OK → [000] → P1 ↑+ P2 ↓- → OK → PrG oK

-↓ +↑ → torQUE → OK → [099] → P1 ↑+ P2 ↓- → OK → PrG oK — Can be set with "Barrier"=1 only.

-↓ +↑ → oP. torQUE → OK → [070] → P1 ↑+ P2 ↓- → OK → PrG oK — Can be set with "Barrier"=1 only.

-↓ +↑ → cLS. torQUE → OK → [070] → P1 ↑+ P2 ↓- → OK → PrG oK — Can be set with "Barrier"=1 only.

-↓ +↑ → brAKE → OK → [052] → P1 ↑+ P2 ↓- → OK → PrG oK

-↓ +↑ → EncodEr → OK → [00 1] → P1 ↑+ P2 ↓- → OK → PrG oK — Can be set with "Barrier"=0,1 only.

-↓ +↑ → bArr IEr* → OK → [00 1] → P1 ↑+ P2 ↓- → OK → PrG oK

* [0] = MOOVI 30RMM/50RMM
[1] = MOOVI 30S
[2] = BGV

+/- → LoG Ic. → OK →

tcA → OK → [on] → P1 ↑ ON P2 ↓ OFF → OK → PrG oK

-↓ +↑ → 3 StEP → OK → [on] → P1 ↑ ON P2 ↓ OFF → OK → PrG oK

-↓ +↑ → Ibl oPEn → OK → [on] → P1 ↑ ON P2 ↓ OFF → OK → PrG oK

-↓ +↑ → Ibl tcA → OK → [oFF] → P1 ↑ ON P2 ↓ OFF → OK → PrG oK

-↓ +↑ → PrE-ALArM → OK → [oFF] → P1 ↑ ON P2 ↓ OFF → OK → PrG oK

-↓ +↑ → Photoc. oPEn → OK → [on] → P1 ↑ ON P2 ↓ OFF → OK → PrG oK

-↓ +↑ → FASt cLS → OK → [oFF] → P1 ↑ ON P2 ↓ OFF → OK → PrG oK

-↓ +↑ → ALArM ScA → OK → [on] → P1 ↑ ON P2 ↓ OFF → OK → PrG oK

-↓ +↑ → MASter → OK → [oFF] → P1 ↑ ON P2 ↓ OFF → OK → PrG oK

-↓ +↑ → tESt Phot → OK → [oFF] → P1 ↑ ON P2 ↓ OFF → OK → PrG oK

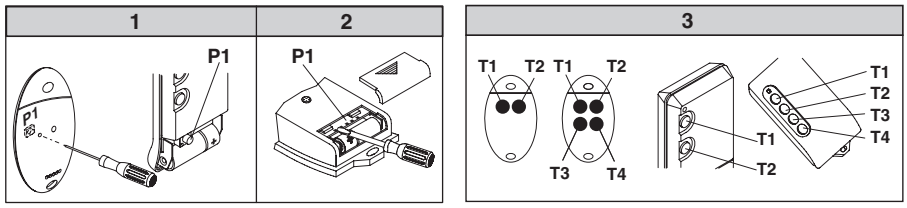
-↓ +↑ → tESt bAr → OK → [oFF] → P1 ↑ ON P2 ↓ OFF → OK → PrG oK

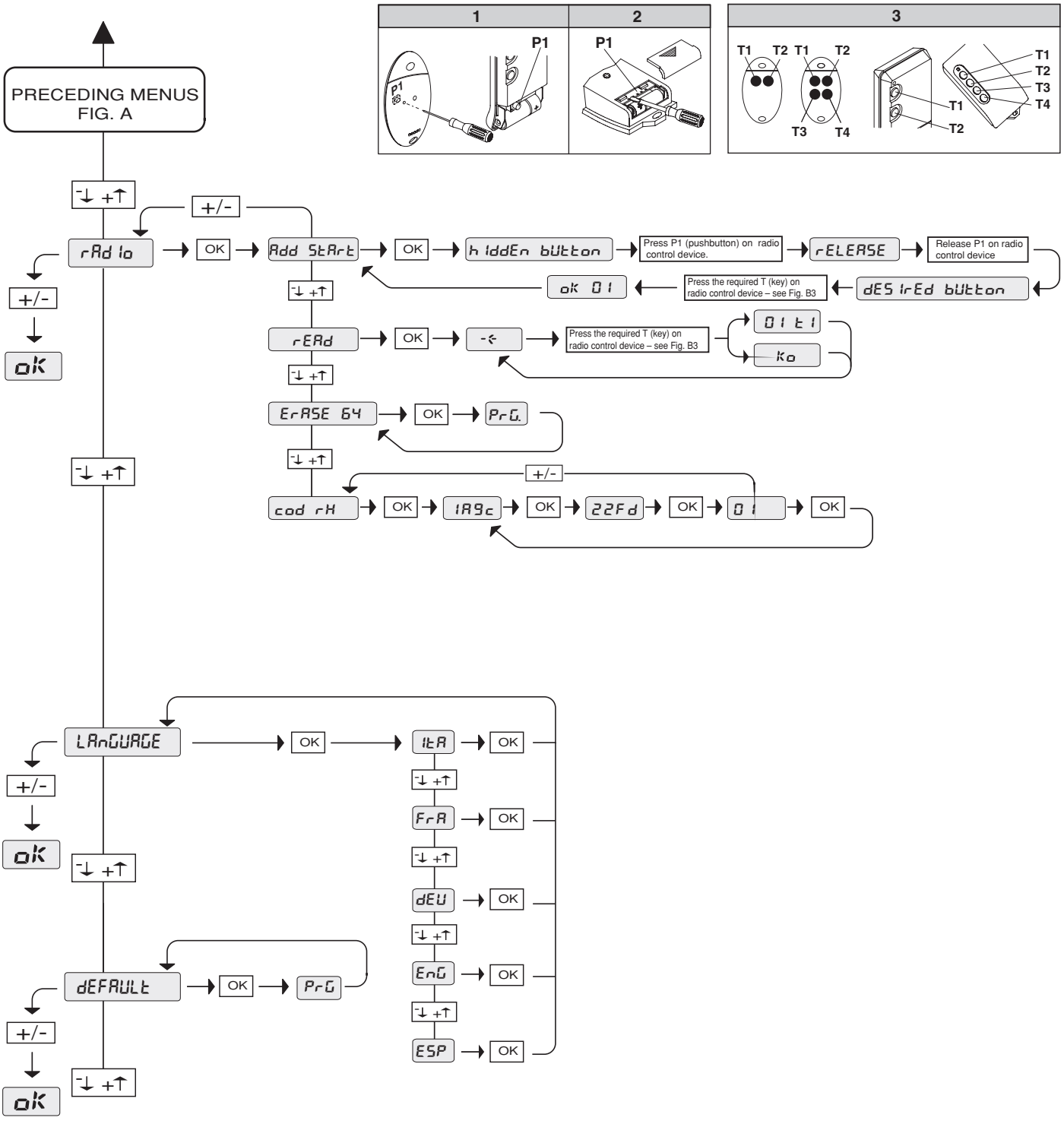
-↓ +↑ → F IXEd codE → OK → [oFF] → P1 ↑ ON P2 ↓ OFF → OK → PrG oK

-↓ +↑ → rAd Io ProG → OK → [on] → P1 ↑ ON P2 ↓ OFF → OK → PrG oK

FOLLOWING MENUS FIG. B

Fig.B


1
2
3
P1
P1
T1
T2
T1
T2
T3
T4
T1
T2
T3
T4
T1
T2


PRECEDING MENUS FIG. A
-↓ +↑
+/-
rAdIo
OK
Add StArt
OK
hiddEn bUttOn
Press P1 (pushbutton) on radio control device.
rELEASE
Release P1 on radio control device
dESIrEd bUttOn
Press the required T (key) on radio control device – see Fig. B3
ok 01
+/-
ok
rEAd
OK
-:-
Press the required T (key) on radio control device – see Fig. B3
01 t1
ko
ErASE 64
OK
PrG.
cod rH
OK
1A9c
OK
22Fd
OK
01
OK
LAnGUAGE
OK
ItA
FrA
dEU
EnG
ESP
dEFAULt
OK
PrG

D811512_02

Fig.1

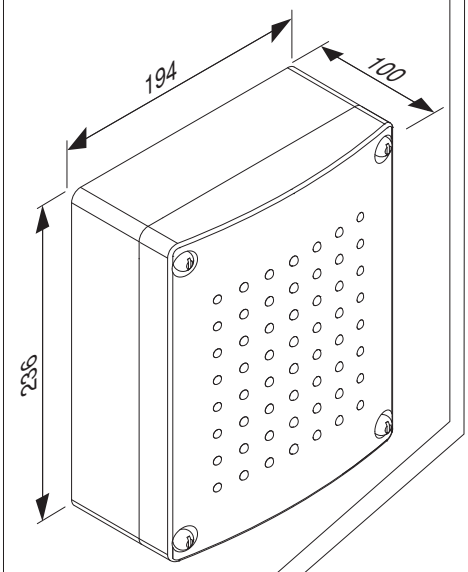


Fig.2

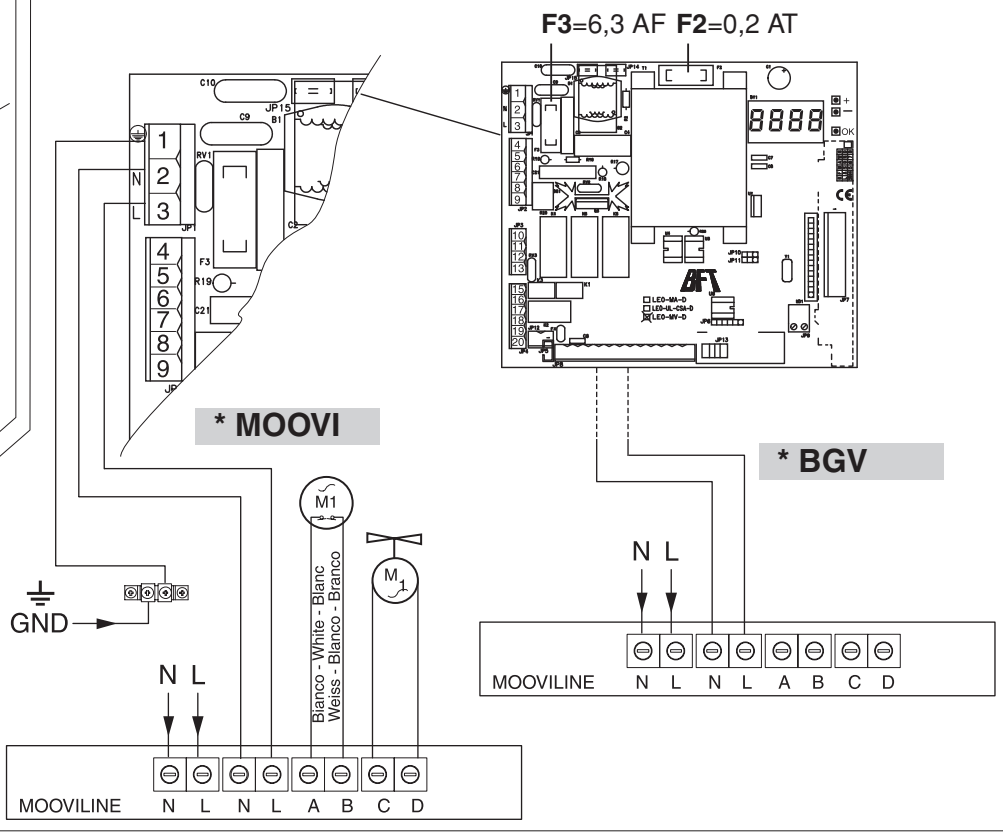
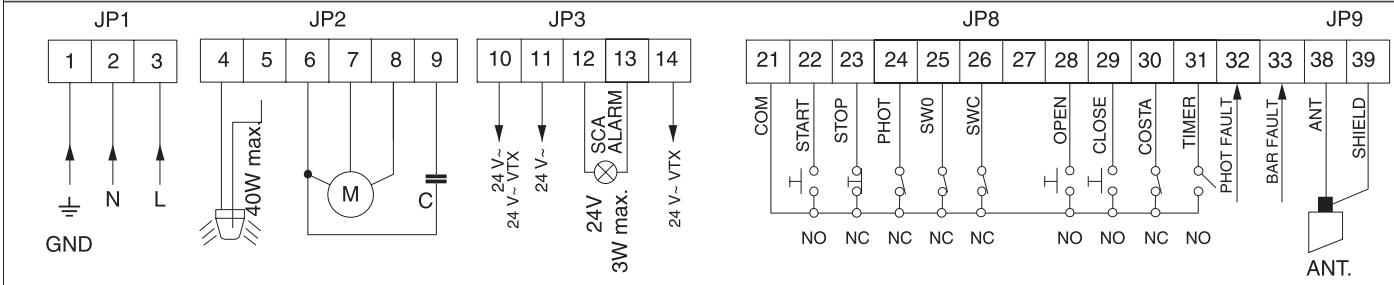


Fig.3



Collegamento dispositivi di sicurezza verificati, Connection of tested safety devices, Connexion des dispositifs de sécurité vérifiés, Anschluß geprüfte Sicherheitsvorrichtungen, Conexión de los dispositivos de seguridad controlados, Ligação de dispositivos de segurança controlados

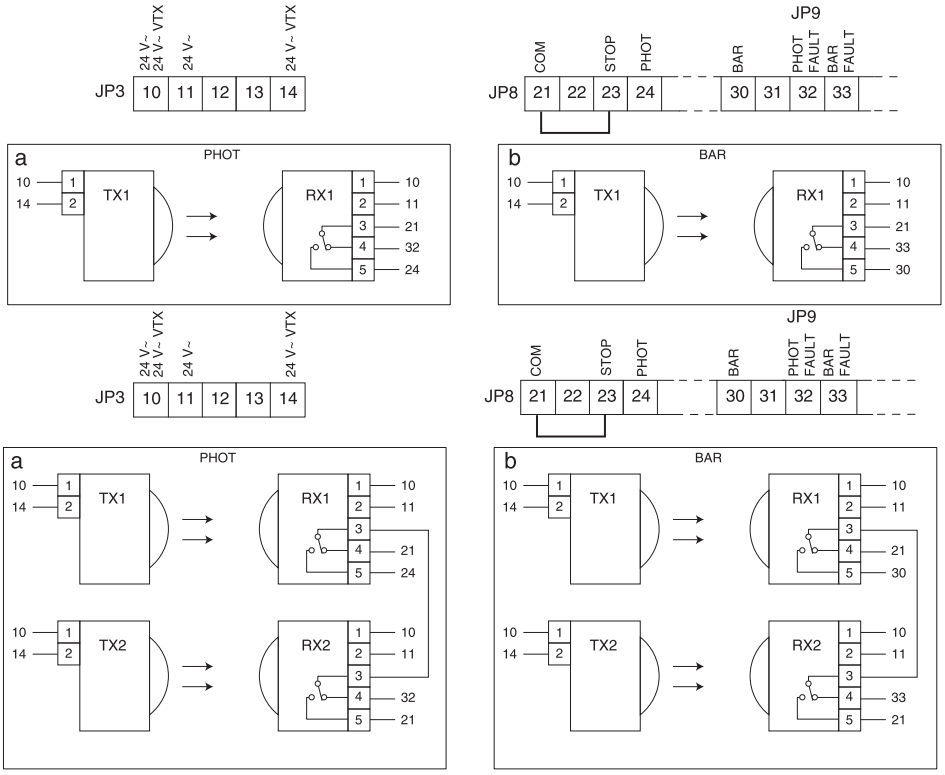
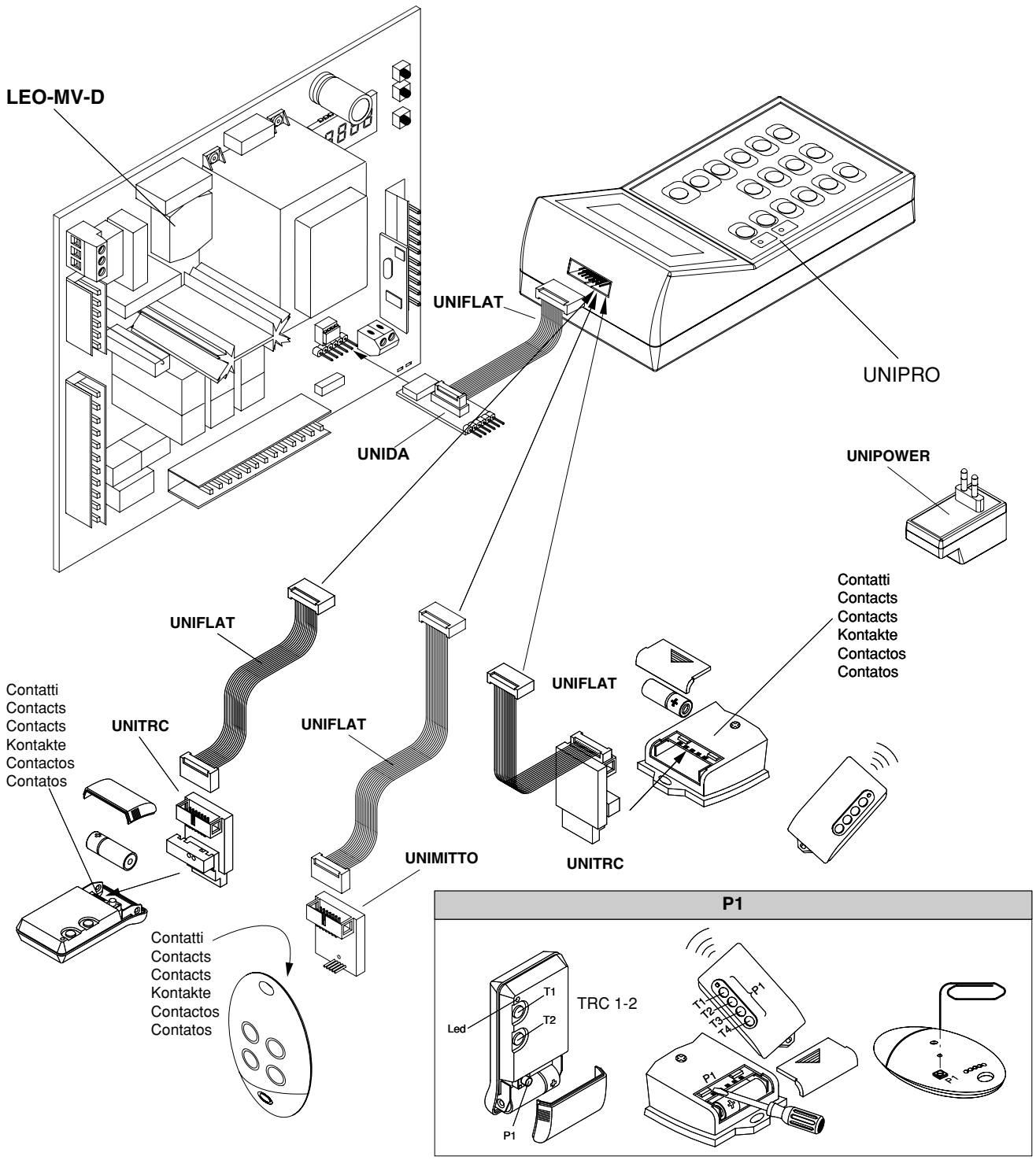
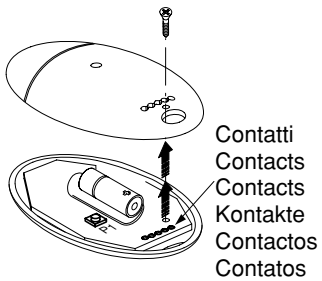


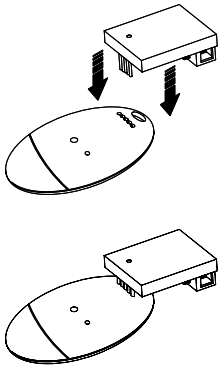
Fig. 4



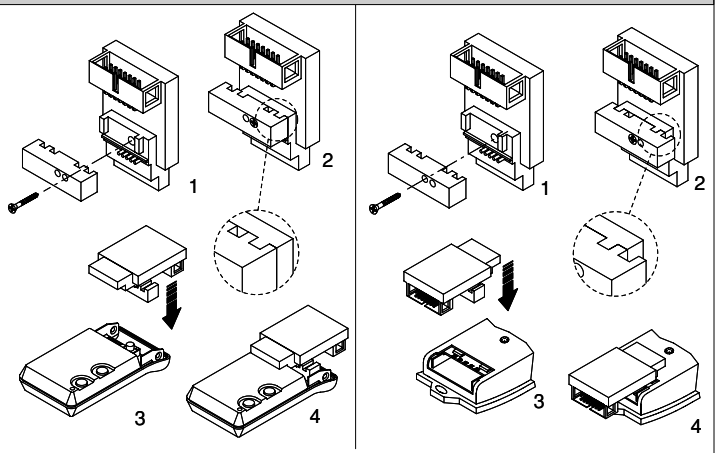
P1



UNIMITTO

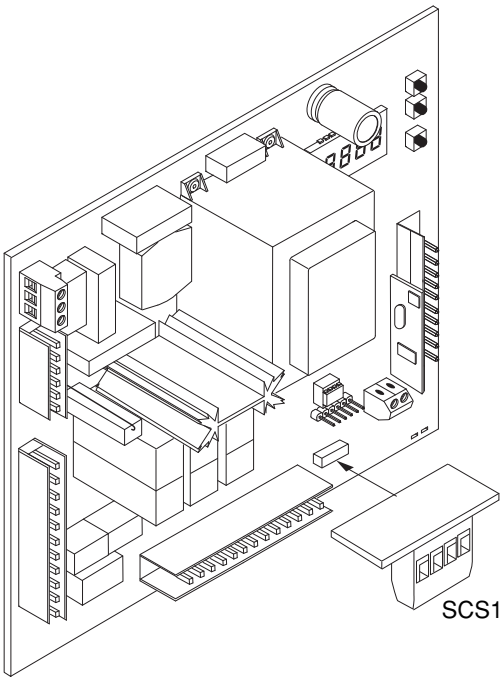


UNITRC



D811512_02

Fig. 5



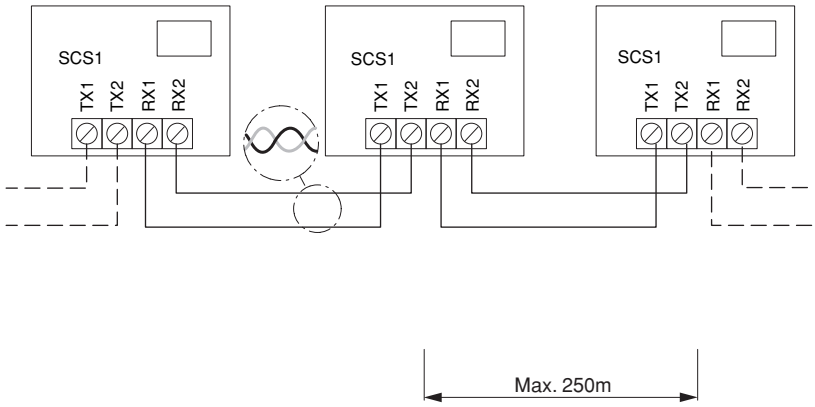


Fig. 6

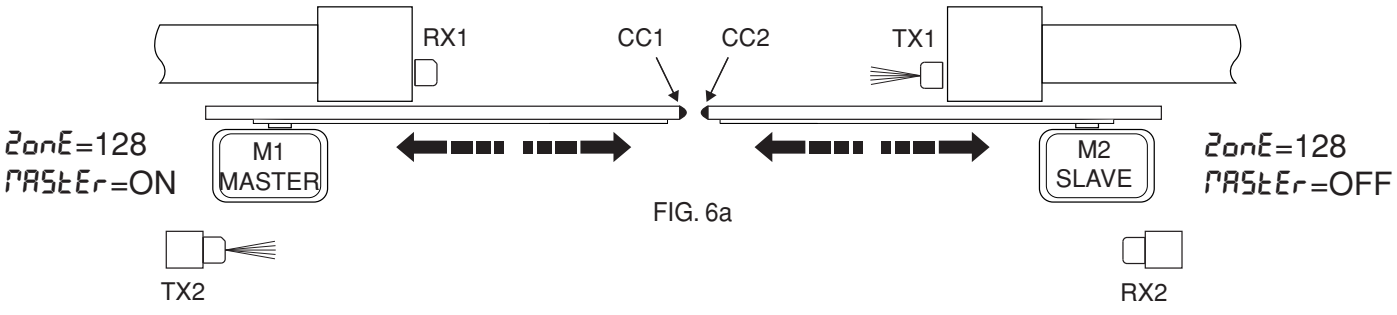
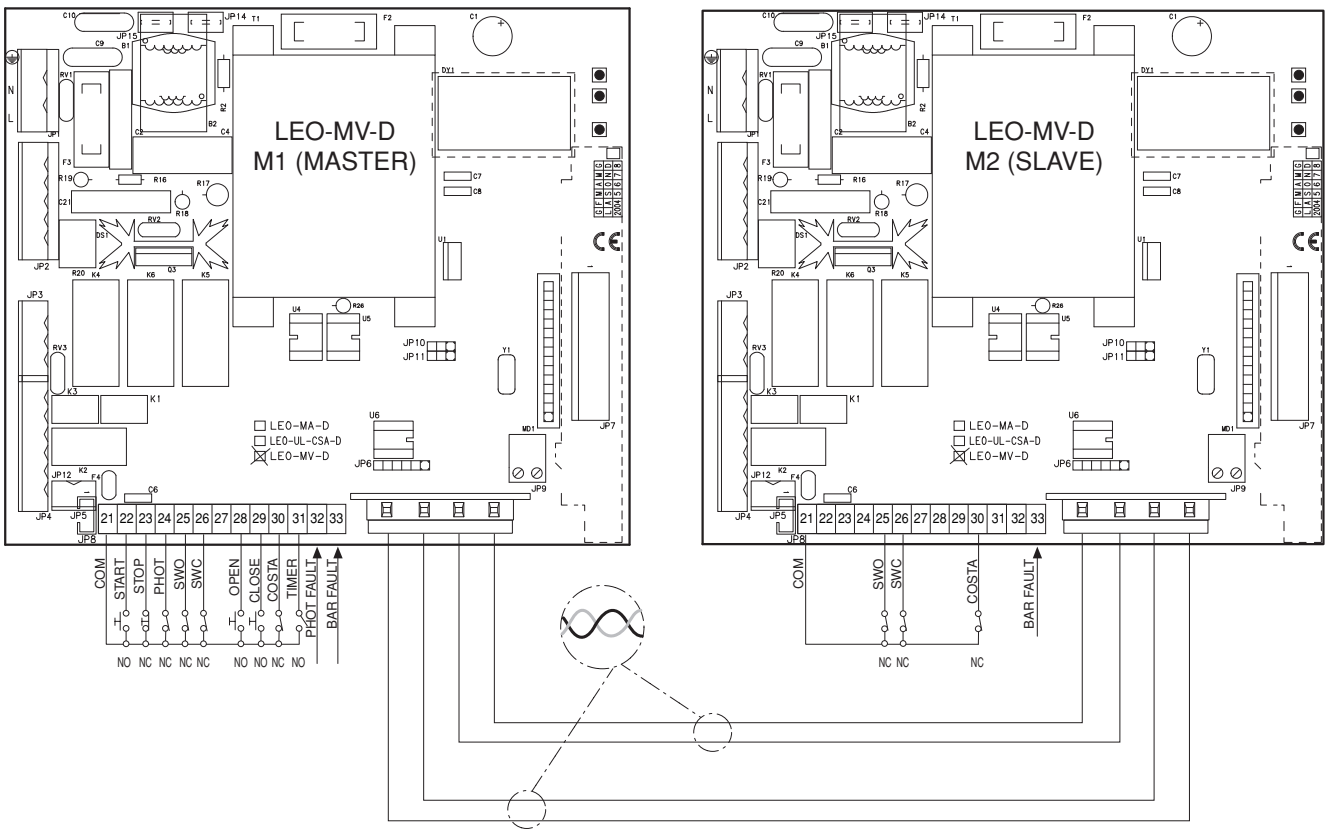


FIG. 6a



D811512_02

Fig. 7